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 now available on STN
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 NEWS 8 Sep 16 Experimental properties added to the REGISTRY file
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 NEWS 11 Oct 24 BEILSTEIN adds new search fields
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 STN
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 NEWS 14 Nov 25 More calculated properties added to REGISTRY
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 NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN
 NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,
 ENERGY, INSPEC
 NEWS 20 Feb 13 CANCERLIT is no longer being updated
 NEWS 21 Feb 24 METADEX enhancements
 NEWS 22 Feb 24 PCTGEN now available on STN
 NEWS 23 Feb 24 TEMA now available on STN
 NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation
 NEWS 25 Feb 26 PCTFULL now contains images
 NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results
 NEWS 27 Mar 20 EVENTLINE will be removed from STN
 NEWS 28 Mar 24 PATDPAFULL now available on STN
 NEWS 29 Mar 24 Additional information for trade-named substances without
 structures available in REGISTRY
 NEWS 30 Apr 11 Display formats in DGENE enhanced
 NEWS 31 Apr 14 MEDLINE Reload
 NEWS 32 Apr 17 Polymer searching in REGISTRY enhanced
 NEWS 33 Apr 21 Indexing from 1947 to 1956 being added to records in
 CA/CAPLUS
 NEWS 34 Apr 21 New current-awareness alert (SDI) frequency in
 WPIDS/WPINDEX/WPIX
 NEWS 35 Apr 28 RDISCLOSURE now available on STN
 NEWS 36 May 05 Pharmacokinetic information and systematic chemical names
 added to PHAR
 NEWS 37 May 15 MEDLINE file segment of TOXCENTER reloaded
 NEWS 38 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated

| | | | | | |
|-----|---|------|---------------------------|-------------------|----------|
| | | | US 1996-700237 A119960820 | | |
| | | | US 1998-128917 A119980804 | | |
| | | | US 2000-492011 A120000126 | | |
| FAN | 1995:797470 | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 9515747 | A1 | 19950615 | WO 1994-US14213 | 19941209 |
| | W: AU, CA, JP | | | US 1993-165392 A | 19931210 |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | US 1993-165392 | 19931210 |
| | US 5468505 | A | 19951121 | US 1992-843485 B2 | 19920228 |
| | | | | US 1993-22687 A2 | 19930301 |
| | AU 9513381 | A1 | 19950627 | AU 1995-13381 | 19941209 |
| | AU 690949 | B2 | 19980507 | US 1993-165392 A | 19931210 |
| | EP 732915 | A1 | 19960925 | WO 1994-US14213W | 19941209 |
| | EP 732915 | B1 | 20000809 | EP 1995-904865 | 19941209 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | US 1993-165392 A | 19931210 |
| JP | 09509401 | T2 | 19970922 | WO 1994-US14213W | 19941209 |
| | AT 195250 | E | 20000815 | JP 1994-516372 | 19941209 |
| | US 6461640 | B1 | 20021008 | US 1993-165392 A | 19931210 |
| | | | | WO 1994-US14213W | 19941209 |
| | | | | AT 1995-904865 | 19941209 |
| | | | | US 1993-165392 A | 19931210 |
| | | | | WO 1994-US14213W | 19941209 |
| | | | | US 1997-967619 | 19971112 |
| | | | | US 1993-165392 A | 19931210 |
| | | | | WO 1994-US14213W | 19941209 |
| | | | | US 1995-569584 B1 | 19951208 |
| FAN | 1995:867596 | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 9509883 | A1 | 19950413 | WO 1994-US11325 | 19941005 |
| | W: AU, BR, CA, JP, KR, NZ | | | US 1993-132507 A | 19931005 |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | US 1993-132507 | 19931005 |
| | US 5462990 | A | 19951031 | US 1990-598880 A3 | 19901015 |
| | | | | US 1991-740703 A2 | 19910805 |
| | AU 9479679 | A1 | 19950501 | AU 1994-79679 | 19941005 |
| | AU 683312 | B2 | 19971106 | US 1993-132507 A | 19931005 |
| | EP 722470 | A1 | 19960724 | WO 1994-US11325W | 19941005 |
| | EP 722470 | B1 | 20000816 | EP 1994-930616 | 19941005 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | US 1993-132507 A | 19931005 |
| JP | 09506012 | T2 | 19970617 | WO 1994-US11325W | 19941005 |
| | AT 195541 | E | 20000915 | JP 1994-511013 | 19941005 |
| | | | | US 1993-132507 A | 19931005 |
| | | | | WO 1994-US11325W | 19941005 |
| | | | | AT 1994-930616 | 19941005 |
| | | | | US 1993-132507 A | 19931005 |
| | | | | WO 1994-US11325W | 19941005 |
| FAN | 1995:964968 | KIND | DATE | APPLICATION NO. | DATE |

| PI | US 5462990 | A | 19951031 | US 1993-132507 | 19931005 |
|-----|---|------|----------|------------------|------------|
| | US 5380536 | A | 19950110 | US 1990-598880 | A319901015 |
| | CA 2173317 | AA | 19950413 | US 1991-740703 | A219910805 |
| | WO 9509883 | A1 | 19950413 | US 1991-740703 | 19910805 |
| | W: AU, BR, CA, JP, KR, NZ
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | US 1990-598880 | A319901015 |
| | AU 9479679 | A1 | 19950501 | CA 1994-2173317 | 19941005 |
| | AU 683312 | B2 | 19971106 | US 1993-132507 | A 19931005 |
| | EP 722470 | A1 | 19960724 | WO 1994-US11325 | 19941005 |
| | EP 722470 | B1 | 20000816 | US 1993-132507 | A 19931005 |
| SE | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, | | | WO 1994-US11325W | 19941005 |
| | JP 09506012 | T2 | 19970617 | EP 1994-930616 | 19941005 |
| | AT 195541 | E | 20000915 | AT 1994-930616 | 19941005 |
| | ES 2152334 | T3 | 20010201 | US 1993-132507 | A 19931005 |
| | US 5567440 | A | 19961022 | WO 1994-US11325W | 19941005 |
| | US 5627233 | A | 19970506 | ES 1994-930616 | 19941005 |
| | US 5849839 | A | 19981215 | US 1993-132507 | A 19931005 |
| | US 6231892 | B1 | 20010515 | US 1995-465949 | 19950606 |
| FAN | 1995:1006705 | | | US 1990-598880 | A319901015 |
| | PATENT NO. | KIND | DATE | US 1991-740703 | A219910805 |
| PI | US 5468505 | A | 19951121 | US 1993-132507 | A319931005 |
| | US 5410016 | A | 19950425 | US 1997-826294 | 19970327 |
| | CA 2178487 | AA | 19950615 | US 1990-598880 | B219901015 |
| | CA 2178487 | C | 20010828 | US 1991-740703 | A219910805 |
| | WO 9515747 | A1 | 19950615 | US 1993-132507 | A319931005 |
| | W: AU, CA, JP | | | US 1995-465949 | A119950606 |
| | | | | US 1997-969910 | 19971113 |
| | | | | US 1990-598880 | B119901015 |
| | | | | US 1994-336393 | A319941110 |
| | | | | APPLICATION NO. | DATE |
| | | | | ----- | ----- |
| | | | | US 1993-165392 | 19931210 |
| | | | | US 1992-843485 | B219920228 |
| | | | | US 1993-22687 | A219930301 |
| | | | | US 1993-22687 | 19930301 |
| | | | | US 1990-598880 | A219901015 |
| | | | | US 1991-740703 | A219910805 |
| | | | | US 1992-843485 | B219920228 |
| | | | | CA 1994-2178487 | 19941209 |
| | | | | US 1993-165392 | A 19931210 |
| | | | | WO 1994-US14213 | 19941209 |

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9513381 A1 19950627 AU 1995-13381 19941209
AU 690949 B2 19980507 US 1993-165392 A 19931210
US 1993-165392 A 19931210
WO 1994-US14213W 19941209
EP 732915 A1 19960925 EP 1995-904865 19941209
EP 732915 B1 20000809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE

JP 09509401 T2 19970922 US 1993-165392 A 19931210
WO 1994-US14213W 19941209
JP 1994-516372 19941209
US 1993-165392 A 19931210
WO 1994-US14213W 19941209
AT 195250 E 20000815 AT 1995-904865 19941209
US 1993-165392 A 19931210
WO 1994-US14213W 19941209
ES 2151952 T3 20010116 ES 1995-904865 19941209
US 1993-165392 A 19931210
US 1997-967619 19971112
US 1993-165392 A 19931210
WO 1994-US14213W 19941209
US 1995-569584 B119951208

FAN 1996:467217
PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5529914 A 19960625 US 1992-958870 19921007
US 1990-598880 B219901015
US 1991-740632 A319910805
US 1991-740703 A219910805
US 1992-843485 B219920228
US 1992-870540 A219920420
US 5232984 A 19930803 US 1991-740632 19910805
US 1990-598880 A319901015
US 5380536 A 19950110 US 1991-740703 19910805
US 1990-598880 A319901015
WO 9316687 A1 19930902 WO 1993-US1776 19930301

W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ,
PL, RO, RU, SD, SK, UA

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
US 1992-843485 A 19920228
US 1992-870540 A 19920420
US 1992-958870 A 19921007

AU 9337809 A1 19930913 AU 1993-37809 19930301
AU 683209 B2 19971106 US 1992-843485 A 19920228
US 1992-870540 A 19920420
US 1992-958870 A 19921007
WO 1993-US1776 A 19930301

EP 627912 A1 19941214 EP 1993-907078 19930301

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE

JP 07506961 T2 19950803 US 1992-843485 A 19920228
JP 3011767 B2 20000221 US 1992-870540 A 19920420
JP 1993-515100 19930301

US 1992-843485 A 19920228
US 1992-870540 A 19920420

| | | | |
|---------------|----|----------|---|
| US 5573934 | A | 19961112 | US 1992-958870 A 19921007
WO 1993-US1776 W 19930301
US 1993-24657 19930301
US 1992-870540 B219920420
US 1992-958870 A219921007
BR 1993-6041 19930301
US 1992-843485 A 19920228
US 1992-870540 A 19920420
US 1992-958870 A 19921007
WO 1993-US1776 W 19930301
CA 1993-2117584 19930301
US 1992-843485 A 19920228
US 1992-870540 A 19920420
US 1992-958870 A 19921007
US 1995-377911 19950125
US 1992-870540 B219920420
US 1992-958870 A219921007
US 1993-24657 A119930301
US 1995-467693 19950606
US 1992-870540 B219920420
US 1992-958870 A219921007
US 1993-24657 A319930301
US 1995-467815 19950606
US 1992-843485 B219920228
US 1992-870540 B219920420
US 1992-958870 A219921007
US 1993-24657 A319930301
US 1995-480678 19950607
US 1992-843485 B219920228
US 1992-870540 B219920420
US 1992-958870 A119921007
US 1997-783387 19970113
US 1992-843485 B219920228
US 1992-870540 B219920420
US 1992-958870 A319921007
US 1995-484160 B319950607
US 1997-969910 19971113
US 1990-598880 B119901015
US 1994-336393 A319941110
US 1998-33871 19980303
US 1992-870540 B219920420
US 1992-958870 A219921007
US 1993-24657 A319930301
US 1994-232054 A319940428
US 1995-467693 A119950606
US 1995-475175 A219950607
US 2001-811901 20010319
US 1992-843485 B219920228
US 1992-870540 B219920420
US 1992-958870 A319921007
US 1995-484160 B319950607
US 1997-783387 A119970113
US 2001-910663 20010719
US 1990-598880 B119901015
US 1992-843485 B219920228
US 1992-870540 B219920420
US 1992-958870 A219921007
US 1993-22687 A119930301
US 1994-336393 A219941110
US 1995-379848 A219950127
US 1995-510089 B119950801 |
| BR 9306041 | A | 19971118 | |
| CA 2117584 | C | 19980922 | |
| US 5858746 | A | 19990112 | |
| US 5834274 | A | 19981110 | |
| US 5843743 | A | 19981201 | |
| US 5801033 | A | 19980901 | |
| US 6258870 | B1 | 20010710 | |
| US 6231892 | B1 | 20010515 | |
| US 6465001 | B1 | 20021015 | |
| US 2002058318 | A1 | 20020516 | |
| US 2003087985 | A1 | 20030508 | |

| FAN | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|------------|---|----------|-----------------|------------|
| PI | US 5573934 | A | 19961112 | US 1993-24657 | 19930301 |
| | US 5529914 | A | 19960625 | US 1992-870540 | B219920420 |
| | US 5858746 | A | 19990112 | US 1992-958870 | A219921007 |
| | US 5834274 | A | 19981110 | US 1992-958870 | 19921007 |
| | US 5843743 | A | 19981201 | US 1990-598880 | B219901015 |
| | US 6465001 | B1 | 20021015 | US 1991-740632 | A319910805 |
| FAN | PATENT NO. | KIND | DATE | US 1991-740703 | A219910805 |
| PI | US 5837747 | A | 19981117 | US 1992-843485 | B219920228 |
| | WO 9309176 | A2 | 19930513 | US 1992-870540 | A219920420 |
| | WO 9309176 | A3 | 19930722 | US 1992-958870 | A219921007 |
| | W: | AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP,
KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US | | US 1993-24657 | A319930301 |
| | RW: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,
BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG | | US 1994-232054 | A319940428 |
| | US 5700848 | A | 19971223 | US 1994-784267 | A219911029 |
| | US 5705270 | A | 19980106 | US 1995-472191 | 19950607 |
| | US 5846530 | A | 19981208 | US 1995-482970 | 19950607 |
| | US 6465001 | B1 | 20021015 | US 1991-784267 | B219911029 |
| | | | | US 1994-232054 | A319940428 |
| | | | | US 1995-475175 | 19950607 |
| | | | | US 1998-33871 | 19980303 |
| | | | | US 1992-870540 | B219920420 |
| | | | | US 1992-958870 | A219921007 |
| | | | | US 1993-24657 | A319930301 |
| | | | | US 1994-232054 | A319940428 |
| | | | | US 1995-467693 | A119950606 |
| | | | | US 1995-475175 | A219950607 |

AB Crosslinkable polysaccharides, polycations and lipids which are capable of undergoing free radical polymn. are used for encapsulation of drugs, biol.

materials and cells, as well as manuf. of bioadhesives and wound dressing.

Alginic acid was reacted with acryloyl chloride in presence of Et₃NH²⁺ under N₂ for 24h to obtain aligate acrylate (I). A polymd. crosslinked gel was prepnd. contg. I 0.1, acrylamide 0.1, water 3.75, glycerol 1.25, methylene bisacrylamide 0.01g.. The gels can be prepnd. as flat sheets that can be applied to wounds.

L17 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Polymer-catalyzed synthesis of acid anhydrides
AN 1990:234482 CAPLUS
DN 112:234482
TI Polymer-catalyzed synthesis of acid anhydrides
IN Fife, Wilmer K.; Zhang, Zhi Dong
PA Indiana University Foundation, USA
SO U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 52,439.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | US 4874558 | A | 19891017 | US 1988-284846 | 19881213 |
| | | | | US 1987-52439 | 19870521 |

OS CASREACT 112:234482; MARPAT 112:234482

AB Acid anhydrides are prepnd. by reaction of carboxylic acids or carboxylate salts with acid halides or acyl-activating agents (e.g., SOCl₂) at 0.degree. to room temp. in the presence of catalysts selected from: (a) solid copolymers of 4-vinylpyridine, (b) solid copolymers of 4-vinylpyridine 1-oxide, and (c) water-sol. homopolymers of 4-vinylpyridine 1-oxide. Thus, reaction of Me(CH₂)₄COCl with PhCO₂H using

Reillex 425 catalyst (crosslinked 4-vinylpyridine copolymer) in CH₂Cl₂ at 0.degree. for 10 min to give Me(CH₂)₄CO₂COPh with 94.6% yield and 100% selectivity. Alternatively, use of EtCO₂H and SOCl₂ at 22-25.degree. in CH₂Cl₂ with the same catalyst gave 96.0% (EtCO)₂O. Use of acid halides and Na formate with a type (b) catalyst gave various mixed formic anhydrides. A type (c) catalyst was used with halides and carboxylate salts in H₂O-CH₂Cl₂ mixts.

L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
AN 1988:22432 CAPLUS
DN 108:22432
TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
IN Hurtel, Patrice; Laurent, Denis; Rondini, Joseph
PA Societe Chimique des Charbonnages, Fr.
SO Fr. Demande, 5 pp.
CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | FR 2592040 | A1 | 19870626 | FR 1985-19116 | 19851224 |

NEWS 39 May 16 CHEMREACT will be removed from STN

| | |
|--------------|---|
| NEWS EXPRESS | April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003 |
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
| NEWS INTER | General Internet Information |
| NEWS LOGIN | Welcome Banner and News Items |
| NEWS PHONE | Direct Dial and Telecommunication Network Access to STN |
| NEWS WWW | CAS World Wide Web Site (general information) |

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STRUCTURE FILE UPDATES: 15 MAY 2003 HIGHEST RN 516445-69-5
DICTIONARY FILE UPDATES: 15 MAY 2003 HIGHEST RN 516445-69-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e methacrylic anhydride/cn
E1 1 METHACRYLIC AMIDE/CN
E2 1 METHACRYLIC AMIDE-METHYL METHACRYLATE-TRIMETHYLOLPROPANE
TRI
E3 1 --> METHACRYLIC ANHYDRIDE/CN
E4 1 METHACRYLIC ANHYDRIDE POLYMER/CN
E5 1 METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3,6-DIOXATHIOCANE/CN
E6 1 METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3,6-TRIOXOCANE/CN

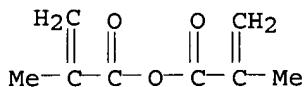
E7 1 METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3-DIOXOLANE/CN
 E8 1 METHACRYLIC ANHYDRIDE, POLYMER WITH
 1-(ALLYLOXY)-3-(DODECYLT
 HIO)-2-PROPANOL/CN
 E9 1 METHACRYLIC ANHYDRIDE, POLYMER WITH ACRYLIC ANHYDRIDE/CN
 E10 1 METHACRYLIC ANHYDRIDE, POLYMER WITH MALEIC ANHYDRIDE/CN
 E11 1 METHACRYLIC ANHYDRIDE, POLYMER WITH METHYL METHACRYLATE/CN
 E12 1 METHACRYLIC ANHYDRIDE, POLYMER WITH TETRAHYDROFURAN/CN

=> e3

L1 1 "METHACRYLIC ANHYDRIDE"/CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
 RN 760-93-0 REGISTRY
 CN 2-Propenoic acid, 2-methyl-, anhydride (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Methacrylic anhydride (6CI, 8CI)
 OTHER NAMES:
 CN Methacrylic acid anhydride
 CN Methacryloyl anhydride
 FS 3D CONCORD
 MF C8 H10 O3
 CI COM
 LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,
 CASREACT,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC*, HSDB*, IFICDB,
 IFIPAT,
 IFIGUB, MSDS-OHS, PIRA, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, NDSL**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

495 REFERENCES IN FILE CA (1957 TO DATE)
 76 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 495 REFERENCES IN FILE CAPLUS (1957 TO DATE)
 25 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e methacrylic acid/cn
 E1 1 METHACRYLESTER C 13, POLYMER WITH BUTYL
 2-METHYL-2-PROPENOAT
 E, ETHENYLBENZENE, METHYL 2-METHYL-2-PROPENOATE,
 1,2-PROPANE
 DIOL MONO(2-METHYL-2-PROPENOATE) AND 2-PROPENOIC ACID/CN
 E2 1 METHACRYLESTER C 13, POLYMER WITH
 N,N-DIMETHYL-N-2-PROPYNYL-
 2-PROPEN-1-AMINIUM CHLORIDE/CN
 E3 1 --> METHACRYLIC ACID/CN
 E4 1 METHACRYLIC ACID .BETA.-CHLOROETHYL ESTER/CN
 E5 1 METHACRYLIC ACID .BETA.-ISOCYANATOETHYL ESTER/CN

| | | |
|-----|---|--|
| E6 | 1 | METHACRYLIC ACID 2,2-DIETHYLHYDRAZIDE/CN |
| E7 | 1 | METHACRYLIC ACID 2-AMINOETHYL ESTER, ACETATE/CN |
| E8 | 1 | METHACRYLIC ACID 2-ETHYL-2-METHYLHYDRAZIDE/CN |
| E9 | 1 | METHACRYLIC ACID 2-ETHYL-2-PROPYLHYDRAZIDE/CN |
| E10 | 1 | METHACRYLIC ACID 2-HYDROXYETHANESULFONIC ACID ESTER/CN |
| E11 | 1 | METHACRYLIC ACID 2-METHYL-2-PROPYLHYDRAZIDE/CN |
| E12 | 1 | METHACRYLIC ACID 3,4-DICHLOROANILIDE/CN |

=> e3

L2 1 "METHACRYLIC ACID"/CN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS

RN 79-41-4 REGISTRY

CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Methacrylic acid (8CI)

OTHER NAMES:

CN .alpha.-Methacrylic acid

CN .alpha.-Methylacrylic acid

CN 2-Methyl-2-propenoic acid

CN 2-Methylacrylic acid

CN GE 110

CN Loctite 3298

CN Methylacrylic acid

CN Norsocryl MAA

FS 3D CONCORD

DR 463311-95-7

MF C4 H6 O2

CI COM

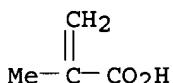
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*,
BIOBUSINESS,

BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,
DETERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,
ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT,
RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2,
USPATFULL, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17684 REFERENCES IN FILE CA (1957 TO DATE)

8643 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

17697 REFERENCES IN FILE CAPLUS (1957 TO DATE)

11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e acetic anhydride/cn

E1 1 ACETIC ACRYLIC ANHYDRIDE/CN
E2 1 ACETIC ALDEHYDE/CN
E3 1 --> ACETIC ANHYDRIDE/CN
E4 1 ACETIC ANHYDRIDE 1:2 COMPLEX WITH THIONYL CHLORIDE/CN
E5 1 ACETIC ANHYDRIDE LABELED WITH CARBON-14/CN
E6 1 ACETIC ANHYDRIDE, BI COMPLEX/CN
E7 1 ACETIC ANHYDRIDE, BISMUTH COMPLEX/CN
E8 1 ACETIC ANHYDRIDE, CD COMPLEX/CN
E9 1 ACETIC ANHYDRIDE, COMPD. WITH
1,4-DIAZABICYCLO(2.2.2)OCTANE/
CN
E10 1 ACETIC ANHYDRIDE, COMPD. WITH 2-AMINOBENZOTHIAZOLE
3-OXIDE/C
N
E11 1 ACETIC ANHYDRIDE, COMPD. WITH 2-PICOLINE/CN
E12 1 ACETIC ANHYDRIDE, COMPD. WITH 2-PICOLINE (1:1)/CN

=> e3

L3 1 "ACETIC ANHYDRIDE"/CN

=> d 13

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 108-24-7 REGISTRY
CN Acetic acid, anhydride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acetic anhydride (8CI)
OTHER NAMES:
CN Acetic oxide
CN Acetyl acetate
CN Acetyl anhydride
CN Acetyl ether
CN Acetyl oxide
CN Ethanoic anhydride
FS 3D CONCORD
MF C4 H6 O3
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DIPPR*,
EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*,
HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC,
PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA,
ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Ac—O—Ac

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13726 REFERENCES IN FILE CA (1957 TO DATE)
338 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13747 REFERENCES IN FILE CAPLUS (1957 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus
COST IN U.S. DOLLARS
FULL ESTIMATED COST

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
| 18.50 | 18.71 |

FILE 'CAPLUS' ENTERED AT 11:58:54 ON 16 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 16 May 2003 VOL 138 ISS 21
FILE LAST UPDATED: 15 May 2003 (20030515/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l1
L4 495 L1

=> l2
L5 17696 L2

=> l3
L6 13752 L3

=> l1 and l2
495 L1
17696 L2
L7 98 L1 AND L2

=> l4 and l5
L8 98 L4 AND L5

=> l8 and l6
L9 15 L8 AND L6

=> phenothiazine
16182 PHENOTHIAZINE
4067 PHENOTHIAZINES
L10 17149 PHENOTHIAZINE
(PHENOTHIAZINE OR PHENOTHIAZINES)

=> hydroquinone
41691 HYDROQUINONE
2212 HYDROQUINONES
L11 42497 HYDROQUINONE
(HYDROQUINONE OR HYDROQUINONES)

=> \l10 or l11
1678 \L10
('L10')
L12 44175 \L10 OR L11

=> l10 or l11
L13 59272 L10 OR L11

=> l9 and l13
L14 3 L9 AND L13

=> d l14 1-3 ti fbib abs

L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
TI Process for the batch manufacture of (meth)acrylic anhydrides
AN 2003:20007 CAPLUS
DN 138:73680
TI Process for the batch manufacture of (meth)acrylic anhydrides
IN Dupont, Bernard; Paul, Jean-Michel
PA Atofina, Fr.
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|------------|
| PI | EP 1273565 | A1 | 20030108 | EP 2002-291695 | 20020705 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | FR 2001-9009 | A 20010706 |
| | FR 2826961 | A1 | 20030110 | FR 2001-9009 | 20010706 |
| | US 2003018217 | A1 | 20030123 | US 2002-186017 | 20020628 |
| | | | | FR 2001-9009 | A 20010706 |
| | JP 2003040832 | A2 | 20030213 | JP 2002-191878 | 20020701 |
| | | | | FR 2001-9009 | A 20010706 |
| | CN 1396149 | A | 20030212 | CN 2002-140293 | 20020704 |
| | | | | FR 2001-9009 | A 20010706 |

AB (meth)acrylic anhydrides are prep'd. in a batch process by reacting acetic anhydride with either acrylic acid or methacrylic acid with elimination of a part of the formed acetic acid followed by its replacement in the reaction mixt. with acetic anhydride and/or (meth)acrylic acids.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
TI Dehydration process and catalyst for the preparation of methacrylic anhydride from methacrylic acid and acetic anhydride
AN 2002:610347 CAPLUS
DN 137:155284
TI Dehydration process and catalyst for the preparation of methacrylic anhydride from methacrylic acid and acetic anhydride
IN Schmitt, Bardo; Knebel, Joachim; Klesse, Wolfgang; Wittkowski, Andrea;
Laux, Bededikt
PA Roehm G.m.b.H. & Co. K.-G., Germany
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-------------------|----------|
| PI | EP 1231201 | A1 | 20020814 | EP 2002-2119 | 20020129 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | DE 2001-10106352A | 20010209 |
| | DE 10106352 | A1 | 20020822 | DE 2001-10106352 | 20010209 |
| | JP 2002275124 | A2 | 20020925 | JP 2002-29706 | 20020206 |
| | US 2002161260 | A1 | 20021031 | DE 2001-10106352A | 20010209 |
| | | | | US 2002-68849 | 20020211 |
| | | | | DE 2001-10106352A | 20010209 |

AB Methacrylic anhydride is manufd. by the dehydration of methacrylic acid and acetic anhydride in the presence of a catalyst (e.g., chromium acetate) and a polymn. inhibitors (e.g., phenothiazine and hydroquinone).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
 TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
 AN 1988:22432 CAPLUS
 DN 108:22432
 TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
 IN Hurtel, Patrice; Laurent, Denis; Rondini, Joseph
 PA Societe Chimique des Charbonnages, Fr.
 SO Fr. Demande, 5 pp.
 CODEN: FRXXBL
 DT Patent
 LA French

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | FR 2592040 | A1 | 19870626 | FR 1985-19116 | 19851224 |
| | FR 2592040 | B1 | 19880715 | | |
| | EP 231689 | A1 | 19870812 | EP 1986-402759 | 19861211 |
| | EP 231689 | B1 | 19901003 | | |
| | R: AT, BE, CH, DE, ES, GB, GR, IT, LI, LU, NL, SE | | | FR 1985-19116 | 19851224 |
| | | | | AT 1986-402759 | 19861211 |
| | | | | FR 1985-19116 | 19851224 |
| | | | | EP 1986-402759 | 19861211 |
| | JP 62158237 | A2 | 19870714 | JP 1986-316041 | 19861224 |
| | JP 03035304 | B4 | 19910527 | | |
| | | | | FR 1985-19116 | 19851224 |
| | US 4857239 | A | 19890815 | US 1988-188585 | 19880429 |
| | | | | FR 1985-19116 | 19851224 |
| | | | | US 1986-945989 | 19861224 |

AB The reaction of (meth)acrylic acid with Ac₂O in the absence of a catalyst and the presence of a polymn. inhibitor gives (meth)acrylic anhydride (i.e., for use in monomer prepn.) in high yield with min. formation of impurities. The AcOH is removed during the reaction. A mixt. of 430 parts methacrylic acid and 255 parts Ac₂O, contg. 2000 ppm phenothiazine and 2000 ppm methylene blue, was heated at 48-63.degree./50-100 mm with removal of AcOH, followed by distn. in vacuo to give 335 parts methacrylic anhydride.

```
=> logff hold
      0 LOGFF
      29061 HOLD
      20908 HOLDS
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49248 HOLD
 (HOLD OR HOLDS)

L15 0 LOGFF HOLD
 (LOGFF(W) HOLD)

=> logoff hold

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 20.44 | 39.15 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -1.95 | -1.95 |

SESSION WILL BE HELD FOR 60 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 12:05:36 ON 16 MAY 2003

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1623paz

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
 SESSION RESUMED IN FILE 'CAPLUS' AT 12:14:32 ON 16 MAY 2003
 FILE 'CAPLUS' ENTERED AT 12:14:32 ON 16 MAY 2003
 COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 20.44 | 39.15 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -1.95 | -1.95 |

=> d his

(FILE 'HOME' ENTERED AT 11:57:21 ON 16 MAY 2003)

FILE 'REGISTRY' ENTERED AT 11:57:28 ON 16 MAY 2003
 E METHACRYLIC ANHYDRIDE/CN

| | |
|----|-----------------------|
| L1 | 1 E3 |
| | E METHACRYLIC ACID/CN |
| L2 | 1 E3 |
| | E ACETIC ANHYDRIDE/CN |
| L3 | 1 E3 |

FILE 'CAPLUS' ENTERED AT 11:58:54 ON 16 MAY 2003

| | |
|-----|---------------------|
| L4 | 495 L1 |
| L5 | 17696 L2 |
| L6 | 13752 L3 |
| L7 | 98 L1 AND L2 |
| L8 | 98 L4 AND L5 |
| L9 | 15 L8 AND L6 |
| L10 | 17149 PHENOTHIAZINE |
| L11 | 42497 HYDROQUINONE |

L12 44175 \L10 OR L11
L13 59272 L10 OR L11
L14 3 L9 AND L13
L15 0 LOGFF HOLD

=> catalyst
624191 CATALYST
624225 CATALYSTS
L16 798956 CATALYST
(CATALYST OR CATALYSTS)

=> l9 and l16
L17 8 L9 AND L16

=> d l17 1-8 ti

L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Dehydration process and **catalyst** for the preparation of
methacrylic anhydride from methacrylic acid and acetic anhydride

L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy
methacrylates and their copolymers

L17 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Organoborane-amine complex initiator systems and polymerizable
compositions made therewith

L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Crosslinkable polysaccharides, polycations and lipids useful for
encapsulation of drugs and cells and manufacture of wound dressings

L17 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Polymer-catalyzed synthesis of acid anhydrides

L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid

L17 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Continuous manufacture of carboxylic anhydrides

L17 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI .alpha.,.beta.-Unsaturated acids and anhydrides

=> d l17 1-8 ti fbib abs

L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Dehydration process and **catalyst** for the preparation of
methacrylic anhydride from methacrylic acid and acetic anhydride
AN 2002:610347 CAPLUS
DN 137:155284
TI Dehydration process and **catalyst** for the preparation of
methacrylic anhydride from methacrylic acid and acetic anhydride
IN Schmitt, Bardo; Knebel, Joachim; Klesse, Wolfgang; Wittkowski, Andrea;
Laux, Bededikt
PA Roehm G.m.b.H. & Co. K.-G., Germany
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-------------------|----------|
| PI | EP 1231201 | A1 | 20020814 | EP 2002-2119 | 20020129 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | DE 2001-10106352A | 20010209 |
| | DE 10106352 | A1 | 20020822 | DE 2001-10106352 | 20010209 |
| | JP 2002275124 | A2 | 20020925 | JP 2002-29706 | 20020206 |
| | | | | DE 2001-10106352A | 20010209 |
| | US 2002161260 | A1 | 20021031 | US 2002-68849 | 20020211 |
| | | | | DE 2001-10106352A | 20010209 |

AB Methacrylic anhydride is manufd. by the dehydration of methacrylic acid and acetic anhydride in the presence of a catalyst (e.g., chromium acetate) and a polymn. inhibitors (e.g., phenothiazine and hydroquinone).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy methacrylates and their copolymers
AN 2001:455945 CAPLUS
DN 135:195876
TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy methacrylates and their copolymers
AU Kammer, Silvio; Keomara, Kim; Sandner, Barbara; Schreiber, Ramona
CS Institut fur Technische und Makromolekulare Chemie, Martin-Luther-Universitat, Halle/Saale, D-06099, Germany
SO Macromolecular Materials and Engineering (2001), 286(5), 276-284
CODEN: MMENFA; ISSN: 1438-7492
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB Partially (20-75%) acylated isopropylidene-bis[1,4-phenylene oxy(2-hydroxy trimethylene)] dimethacrylate (BisGMA) was prep'd. by a single step reaction of 2,2-bis[4-(2,3-epoxy propoxy)phenyl]propane (DGEBA) with methacrylic acid (MAA), methacrylic anhydride (MAAn) and/or acetic anhydride catalyzed by 0.8 mol-% N-Me imidazole at 90-100.degree.C. In any case, MAA was substituted by an equimolar quantity of the anhydride. The reaction kinetics of DGEBA with MAA and MAAn follows a first order law

up to a conversion of epoxy groups corresponding to the initial molar ratio of MAAn. The viscosity of BisGMA decreased with an increase in the acylation degree. Acylated BisGMA was copolymd. with triethylene glycol dimethacrylate by use of a redox initiator system at room temp. and with vinyltoluene (VT) initiated by di-tert-Bu peroxide at 150-200.degree.C, resp., both in the presence of 70-76 wt.-% of quartz filler. Different dependencies of the content of sol and the conversion of C=C double bonds were obsd. for thermally polymd. composites from VT with acetylated and methacrylated BisGMA, resp. Methacrylated BisGMA yielded composites with reduced water uptake. The higher network d. of the polymer matrix with methacrylated BisGMA resulted in a higher glass transition temp. Tg and a higher storage modulus of the composites. The initial temp. of wt. loss of composites with VT was increased from 230.degree.C for composites with BisGMA up to 258.degree.C for composites with BisGMA methacrylated to a degree of 40%.

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
 TI Organoborane-amine complex initiator systems and polymerizable compositions made therewith
 AN 1998:268527 CAPLUS
 DN 128:322549
 TI Organoborane-amine complex initiator systems and polymerizable compositions made therewith
 IN Pocius, Alphonsus V.; Deviny, E. John
 PA Minnesota Mining and Manufacturing Co., USA
 SO PCT Int. Appl., 58 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------|--|------|----------|------------------|----------|
| PI | WO 9817694 | A1 | 19980430 | WO 1997-US2766 | 19970225 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US | 5935711 | A | 19990810 | US 1996-735765 A | 19961023 |
| AU | 9719684 | A1 | 19980515 | US 1996-735765 | 19961023 |
| | | | | AU 1997-19684 | 19970225 |
| | | | | US 1996-735765 A | 19961023 |
| | | | | WO 1997-US2766 W | 19970225 |
| EP | 934344 | A1 | 19990811 | EP 1997-907773 | 19970225 |
| EP | 934344 | B1 | 20021023 | | |
| | R: DE, FR, GB | | | US 1996-735765 A | 19961023 |
| | | | | WO 1997-US2766 W | 19970225 |
| BR | 9712554 | A | 19991019 | BR 1997-12554 | 19970225 |
| | | | | US 1996-735765 A | 19961023 |
| | | | | WO 1997-US2766 W | 19970225 |
| CN | 1234041 | A | 19991103 | CN 1997-198945 | 19970225 |
| | | | | US 1996-735765 A | 19961023 |
| JP | 2001502689 | T2 | 20010227 | JP 1998-519319 | 19970225 |
| | | | | US 1996-735765 A | 19961023 |
| | | | | WO 1997-US2766 W | 19970225 |
| OS | MARPAT 128:322549 | | | | |
| AB | A compn. comprises organoborane-amine complex and aziridine-functional material. The compn. can form a part of a polymn. initiator system that also includes a compd. such an acid that is reactive with the amine portion of the complex to liberate the organoborane. The system is useful for initiation of polymn. of acrylic monomer in formation of acrylic adhesives that have exceptionally good adhesion to low surface energy polymers. A typical adhesive contained Me methacrylate (I) 8.45, Bu acrylate 6.08, Et acrylate-I copolymer thickener 6.73, methacrylic acid (amine-reactive compd.) 1.24, CX 100 [tris(methylaziridine) of trimethylolpropane triacrylate] 5.17, and Et ₃ B-1,6-hexanediamine complex 2.33 g. | | | | |
| RE.CNT 4 | THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT | | | | |

L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
 TI Crosslinkable polysaccharides, polycations and lipids useful for

encapsulation of drugs and cells and manufacture of wound dressings
 AN 1993:525199 CAPLUS
 DN 119:125199
 TI Crosslinkable polysaccharides, polycations and lipids useful for
 encapsulation of drugs and cells and manufacture of wound dressings
 IN Soon-Shiong, Patrick; Desai, Neil P.; Sandford, Paul A.; Heintz, Roswitha
 A.; Sojomihardjo, Soebianto
 PA Clover Consolidated, Ltd., Switz.
 SO PCT Int. Appl., 53 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT.12

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|---|----------|---|----------|
| PI | WO 9309176 | A2 | 19930513 | WO 1992-US9364 | 19921029 |
| | WO 9309176 | A3 | 19930722 | | |
| | W: | AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP,
KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US | | | |
| | RW: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,
BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG | | | |
| | AU 9331247 | A1 | 19930607 | US 1991-784267 A219911029
AU 1993-31247 19921029
US 1991-784267 A 19911029
WO 1992-US9364 A 19921029 | |
| | EP 610441 | A1 | 19940817 | EP 1992-925046 19921029 | |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE | | | |
| | US 5837747 | A | 19981117 | US 1994-232054 19940428
US 1991-784267 B219911029
WO 1992-US9364 A 19921029 | |

PATENT FAMILY INFORMATION:

FAN 1992:497329

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|-------------|--|----------|---|----------|
| PI | WO 9206678 | A1 | 19920430 | WO 1991-US7051 | 19910925 |
| | W: | AU, CA, JP, KR, NO | | | |
| | RW: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE | | | |
| | AU 9187557 | A1 | 19920520 | US 1990-598880 A 19901015
AU 1991-87557 19910925
US 1990-598880 A 19901015
WO 1991-US7051 A 19910925 | |
| | EP 553195 | A1 | 19930804 | EP 1991-918587 19910925 | |
| | EP 553195 | B1 | 19970611 | | |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | |
| | AT 154242 | E | 19970615 | US 1990-598880 A 19901015
WO 1991-US7051 W 19910925
AT 1991-918587 19910925 | |
| | ES 2104727 | T3 | 19971016 | US 1990-598880 A 19901015
ES 1991-918587 19910925 | |
| | US 5820882 | A | 19981013 | US 1990-598880 A 19901015
US 1994-336393 19941110 | |
| | US 6231892 | B1 | 20010515 | US 1990-598880 A 119901015
US 1997-969910 19971113
US 1990-598880 B119901015
US 1994-336393 A319941110 | |
| FAN | 1993:610747 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 9316687 | A1 | 19930902 | WO 1993-US1776 | 19930301 |

W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ,
 PL, RO, RU, SD, SK, UA
 RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 US 5529914 A 19960625 US 1992-843485 A 19920228
 AU 9337809 A1 19930913 AU 1993-37809 19930301
 AU 683209 B2 19971106 US 1992-843485 A 19920228
 EP 627912 A1 19941214 EP 1993-907078 19930301
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
 SE US 1992-843485 A 19920228
 JP 07506961 T2 19950803 JP 1993-515100 19930301
 JP 3011767 B2 20000221 US 1992-843485 A 19920228
 BR 9306041 A 19971118 BR 1993-6041 19930301
 FAN 1993:656535
 PATENT NO. KIND DATE APPLICATION NO. DATE
 PI WO 9317669 A1 19930916 WO 1993-US1773 19930301
 W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO,
 NZ, PL, RO, RU, SD, SK, UA
 RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 AU 9337353 A1 19931005 AU 1993-37353 19930301
 AU 673160 B2 19961031 US 1992-843485 A 19920228
 EP 627911 A1 19941214 EP 1993-906255 19930301
 EP 627911 B1 20001025 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
 SE US 1992-843485 A 19920228
 JP 07507056 T2 19950803 WO 1993-US1773 W 19930301
 JP 3011768 B2 20000221 JP 1993-515790 19930301
 BR 9306038 A 19980113 US 1992-843485 A 19920228
 BR 1993-6038 19930301
 US 1992-843485 A 19920228
 WO 1993-US1773 W 19930301

| | | | | |
|-----------------|------|----------|------------------|------------|
| CA 2117588 | C | 19980825 | CA 1993-2117588 | 19930301 |
| AT 197125 | E | 20001115 | US 1992-843485 A | 19920228 |
| ES 2153378 | T3 | 20010301 | AT 1993-906255 | 19930301 |
| FAN 1995:599622 | | | US 1992-843485 A | 19920228 |
| PATENT NO. | KIND | DATE | WO 1993-US1773 W | 19930301 |
| PI US 5410016 | A | 19950425 | ES 1993-906255 | 19930301 |
| US 5380536 | A | 19950110 | US 1992-843485 A | 19920228 |
| US 5468505 | A | 19951121 | US 1991-740703 | 19910805 |
| US 5626863 | A | 19970506 | US 1990-598880 A | 19901015 |
| US 5567435 | A | 19961022 | US 1991-740703 | 19910805 |
| US 5986043 | A | 19991116 | US 1993-165392 | 19931210 |
| US 6231892 | B1 | 20010515 | US 1992-843485 B | 219920228 |
| US 6060582 | A | 20000509 | US 1993-22687 | A219910805 |
| US 6306922 | B1 | 20011023 | US 1993-379848 | A219910805 |
| US 2003087985 | A1 | 20030508 | US 1995-468364 | A319901015 |
| US 2002091229 | A1 | 20020711 | US 1992-843485 B | 219920228 |
| | | | US 1993-22687 | A319910805 |
| | | | US 1995-379848 A | 319910805 |
| | | | US 1995-468364 A | 319910805 |
| | | | US 1996-700237 A | 319910805 |
| | | | US 1992-843485 B | 219920228 |
| | | | US 1993-22687 A | 319910805 |
| | | | US 1995-379848 A | 319910805 |
| | | | US 1995-468364 A | 319910805 |
| | | | US 1996-700237 A | 319910805 |
| | | | US 1997-969910 A | 319910805 |
| | | | US 1990-598880 B | 119901015 |
| | | | US 1994-336393 A | 319941110 |
| | | | US 1998-128917 A | 319941110 |
| | | | US 1992-843485 B | 219920228 |
| | | | US 1993-22687 A | 319930301 |
| | | | US 1995-379848 A | 319950127 |
| | | | US 1995-468364 A | 319950606 |
| | | | US 1996-700237 A | 319950606 |
| | | | US 2000-492011 A | 319950606 |
| | | | US 1992-843485 B | 219920228 |
| | | | US 1993-22687 A | 319930301 |
| | | | US 1995-379848 A | 319950127 |
| | | | US 1995-468364 A | 319950606 |
| | | | US 1996-700237 A | 319960820 |
| | | | US 1998-128917 A | 319980804 |
| | | | US 2001-910663 A | 319980804 |
| | | | US 1990-598880 B | 119901015 |
| | | | US 1992-843485 B | 219920228 |
| | | | US 1992-870540 B | 219920420 |
| | | | US 1992-958870 A | 219921007 |
| | | | US 1993-22687 A | 319930301 |
| | | | US 1994-336393 A | 319941110 |
| | | | US 1995-379848 A | 319950127 |
| | | | US 1995-510089 B | 319950801 |
| | | | US 2001-21508 A | 319950801 |
| | | | US 1992-843485 B | 219920228 |
| | | | US 1993-22687 A | 319930301 |
| | | | US 1995-379848 A | 319950127 |
| | | | US 1995-468364 A | 319950606 |

| | | | | |
|---|----|----------|----------------|----------|
| FR 2592040 | B1 | 19880715 | | |
| EP 231689 | A1 | 19870812 | EP 1986-402759 | 19861211 |
| EP 231689 | B1 | 19901003 | | |
| R: AT, BE, CH, DE, ES, GB, GR, IT, LI, LU, NL, SE | | | | |
| | | | FR 1985-19116 | 19851224 |
| AT 57177 | E | 19901015 | AT 1986-402759 | 19861211 |
| | | | FR 1985-19116 | 19851224 |
| | | | EP 1986-402759 | 19861211 |
| JP 62158237 | A2 | 19870714 | JP 1986-316041 | 19861224 |
| JP 03035304 | B4 | 19910527 | | |
| | | | FR 1985-19116 | 19851224 |
| US 4857239 | A | 19890815 | US 1988-188585 | 19880429 |
| | | | FR 1985-19116 | 19851224 |
| | | | US 1986-945989 | 19861224 |

AB The reaction of (meth)acrylic acid with Ac₂O in the absence of a catalyst and the presence of a polymn. inhibitor gives (meth)acrylic anhydride (i.e., for use in monomer prepn.) in high yield with min. formation of impurities. The AcOH is removed during the reaction. A mixt. of 430 parts methacrylic acid and 255 parts Ac₂O, contg. 2000 ppm phenothiazine and 2000 ppm methylene blue, was heated at 48-63.degree./50-100 mm with removal of AcOH, followed by distn. in vacuo to give 335 parts methacrylic anhydride.

L17 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
 TI Continuous manufacture of carboxylic anhydrides
 AN 1986:610785 CAPLUS
 DN 105:210785
 TI Continuous manufacture of carboxylic anhydrides
 IN Bott, Kaspar; Anderlohr, Axel; Faust, Tillmann; Guth, Josef
 PA BASF A.-G. , Fed. Rep. Ger.
 SO Ger. Offen., 7 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------|-------------|------|----------|-----------------|----------|
| PI | DE 3510035 | A1 | 19860925 | DE 1985-3510035 | 19850320 |
| | JP 61215345 | A2 | 19860925 | JP 1986-52779 | 19860312 |
| | JP 06021101 | B4 | 19940323 | | |
| | | | | DE 1985-3510035 | 19850320 |
| | EP 196520 | A1 | 19861008 | EP 1986-103449 | 19860314 |
| R: AT, BE, CH, DE, FR, GB, IT, LI, NL | | | | | |
| | | | | DE 1985-3510035 | 19850320 |
| | ES 553199 | A1 | 19870116 | ES 1986-553199 | 19860320 |
| | | | | DE 1985-3510035 | 19850320 |

AB (RCO)₂O (R = satd. or unsatd. C₂-12 residue) are prep'd. by acid-catalyzed reaction of Ac₂O with the corresponding acid. A packed distn. column with .apprx.15 theor. plates, 1.5 m tall, having an internal diam. of 5 cm, was maintained at 30 mbar. At the 5th plate, 340 g/h Ac₂O was added, and at the 10th plate, 5 g MeSO₃H in 430 g methacrylic acid was added hourly. At the column head (reflux ratio 5), 300 g AcOH and 85 g Ac₂O were removed, while at the bottom, 385 g/h 99.4% pure methacrylic anhydride was removed.

L17 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
 TI .alpha.,.beta.-Unsaturated acids and anhydrides
 AN 1978:460243 CAPLUS

DN 89:60243
TI .alpha.,.beta.-Unsaturated acids and anhydrides
IN Holmes, Jerry D.
PA Eastman Kodak Co., USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | US 4085143 | A | 19780418 | US 1975-583937 | 19750605 |
| | | | | US 1975-583937 | 19750605 |

AB The title compds. were manufd. from HCHO and a satd. acid anhydride having

1 less carbon atom than the desired product in the vapor phase over a fixed-bed **catalyst**. A **catalyst** was prep'd. by refluxing 72 g TiCl₄ in hexane with 100 g Davision G-59 silica gel for 5 h, washing with hexane, and hydrolyzing with aq. NH₄OH. The **catalyst** (50 mL) was heated 2 h at 550.degree. with 2.72 mol/h N flow and then heated in air .apprx.1.5 h at 550.degree.. A mixt. of 1.59 mol HCHO and 2.73 mol acetic anhydride [108-24-7] were fed, along with 1.25 mol/h N, into a reactor at 245-65.degree. contg. the **catalyst** to yield over a 3 h period a mixt. of acrylic acid [79-10-7] and acrylic anhydride [2051-76-5] with HCHO conversion 48% and acetic anhydride conversion 52%.

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 53.71 | 72.42 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -7.16 | -7.16 |

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 12:20:13 ON 16 MAY 2003